To:	Nippon Electric Glass Co., Ltd. (svoeller@hsml.com)
Subject:	U.S. TRADEMARK APPLICATION NO. 79137917 - NIPPON ELECTRIC GLASS - 08279.1699US
Sent:	8/20/2015 11:40:46 AM
Sent As:	ECOM105@USPTO.GOV
Attachments:	Attachment - 1 Attachment - 2 Attachment - 3 Attachment - 4 Attachment - 5 Attachment - 6 Attachment - 7 Attachment - 8 Attachment - 9 Attachment - 10 Attachment - 11 Attachment - 12 Attachment - 13

UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)
OFFICE ACTION (OFFICIAL LETTER) ABOUT APPLICANT'S TRADEMARK APPLICATION

U.S. APPLICATION SERIAL NO. 79137917

MARK: NIPPON ELECTRIC GLASS

79137917

CORRESPONDENT ADDRESS:
SARAH G. VOELLER
HAMRE, SCHUMANN, MUELLER & LARSON, P.C.
P.O. BOX 2902
MINNEAPOLIS, MN 55402

CLICK HERE TO RESPOND TO THIS L
http://www.uspto.gov/trademarks/teas/response_

VIEW YOUR APPLICATION FILE

APPLICANT: Nippon Electric Glass Co., Ltd.

CORRESPONDENT'S REFERENCE/DOCKET NO :
08279.1699US
CORRESPONDENT E-MAIL ADDRESS:
svoeller@hsml.com

OFFICE ACTION

STRICT DEADLINE TO RESPOND TO THIS LETTER

TO AVOID ABANDONMENT OF APPLICANT'S TRADEMARK APPLICATION, THE USPTO MUST RECEIVE APPLICANT'S COMPLETE RESPONSE TO THIS LETTER **WITHIN 6 MONTHS** OF THE ISSUE/MAILING DATE BELOW.

ISSUE/MAILING DATE: 8/20/2015

THIS IS A FINAL ACTION.

INTERNATIONAL REGISTRATION NO. 1180257

This Office action is in response to applicant's communications filed on May 15, 2015 and July 8, 2015. An Office action issued December 11, 2014 made final two requirements: a requirement for a disclaimer of ELECTRIC in specified classes and a requirement for an amended identification in classes 009, 011, and 021.

In its latest responses, applicant has "revoked" its disclaimer of GLASS, on the grounds that it has already provided evidence of the mark's acquired distinctiveness. Applicant also amended the identification and argued against the disclaimer requirement for ELECTRIC.

The identification of goods is acceptable. The requirement for a disclaimer of GLASS is made final, as applicant's evidence does not support a finding of acquired distinctiveness for GLASS. The requirement for a disclaimer of ELECTRIC is also again made final, as applicant's arguments and evidence are unpersuasive.

Final Requirement: Disclaimer of "GLASS" and Disclaimer of "ELECTRIC" in classes 001, 011, 019, 021

Applicant must disclaim the wording "ELECTRIC" in classes 001, 011, 019, and 021, and the wording " GLASS" because it is a generic designation for applicant's goods and/or services and is thus an unregistrable component of the mark. *See* 15 U.S.C. §§1052(e)(1), 1056(a); *In re Am. Inst. of Certified Pub. Accountants*, 65 USPQ2d 1972, 1981-85 (TTAB 2003); TMEP §§1212.02(e), 1213.03(b).

Determining whether a mark is generic requires a two-step inquiry:

(1) What is the genus of goods and/or services at issue?

(2) Does the relevant public understand the designation primarily to refer to that genus of goods and/or services?

H. Marvin Ginn Corp. v. Int'l Ass'n of Fire Chiefs, Inc., 782 F.2d 987, 989-90, 228 USPQ 528, 530 (Fed. Cir. 1986); *In re Meridian Rack & Pinion*, 114 USPQ2d 1462, 1463 (TTAB 2015) (citing *In re 1800Mattress.com IP, LLC*, 586 F.3d 1359, 1363, 92 USPQ2d 1682, 1684 (Fed. Cir. 2009)); TMEP §1209.01(c)(i).

Regarding the first part of the inquiry, the genus of goods and/or services is often defined by an applicant's identification of goods and/or services. *In re Meridian Rack & Pinion*, 114 USPQ2d at 1463 (citing *Magic Wand Inc. v. RDB Inc.*, 940 F.2d 638, 640, 19 USPQ2d 1551, 1552 (Fed. Cir. 1991)).

In this case, the application identifies the goods as a variety of goods containing or made of glass, which adequately defines the genus at issue. As evidence, applicant's identification of goods makes repeated reference to glass goods. As examples, and not an exhaustive list, see the following goods:

- "Chemicals containing glass for use in industry" in International Class 001;
- "Loading and unloading pallets of metal for use in the manufacture of glassware" in International Class 006;
- "Crystallized glass transport devices, namely, conveyors for use in the manufacture or processing of crystallized glass" in International Class 007;
- "Infrared-ray absorbing glass, not for building" in International Class 009;
- "Glass syringes for medical purposes" in International Class 010;
- "Glass windows sold as a part of stoves" in International Class 011;
- "Glass fiver materials for insulation" in International Class 017;
- "Building glass" in International Class 019;
- "Furniture using radiation shield glass, namely, single-leaf screens, folding screens and partitions" in International Class 020;
- "Glass, unworked or semi-worked, namely, glass substrates, glass tubes, glass for exhaust tubes, and sealing glass, all for liquid crystal displays, plasma displays, field-emission displays, organic electroluminescence displays, inorganic electroluminescence displays, flat-panel displays and other panel displays" in International Class 021;
- "Glass fibers for textile use" in International Class 022;
- "Fiberglass thread and yarn, for textile use" in International Class 023;
- "Fiberglass felts and non-woven fabrics" in International Class 024.

As shown by applicant's identification of goods, "glass" is a common feature or characteristic of many of the applicant's goods. The word GLASS in the mark has little, if any, source-identifying significance. Therefore, the term must be disclaimed.

In this case, the application identifies the goods as a variety of goods that are electric or for use with electric goods, which adequately defines the genus at issue. As examples, and not an exhaustive list, see the following goods:

- "Chemicals used for forming dielectric layers on electric and electronic components, forming ribs for pixels located inside of a display panel, forming coated layers, binding metallic powder, binding or powdery coating" in International Class 001;
- "Electric lamps" in International Class 011;
- "Building glass used for internal walls of electric furnaces for burning electronic component" in International Class 019;
- "Glass used for electric wires and cables" in International Class 021.

As shown by applicant's identification of goods, "electric" is a common feature or characteristic of many of the applicant's goods. The word ELECTRIC in the mark has little, if any, source-identifying significance in the specified classes. Therefore, the term must be disclaimed.

Even if the mark is registrable under Section 2(f), the unregistrable components must be disclaimed. *See In re Creative Goldsmiths of Wash., Inc.*, 229 USPQ 766, 768 (TTAB 1986) ("[W]e conclude that it is within the discretion of an Examining Attorney to require the disclaimer of an unregistrable component (such as a common descriptive, or generic, name) of a composite mark sought to be registered on the

Principal Register under the provisions of Section 2(f).”). In this case, GLASS must be disclaimed in all classes and ELECTRIC in the specified classes, because they are unregistrable components of an otherwise registrable mark. They immediately identify features of the goods (such as being made of glass, or being electrically-operated) and do not function as an identifier of source.

Regarding the second part of the inquiry, the relevant public is the purchasing or consuming public for the identified goods and/or services. *Sheetz of Del., Inc. v. Doctor's Assocs. Inc.*, 108 USPQ2d 1341, 1351 (TTAB 2013) (citing *Magic Wand Inc. v. RDB Inc.*, 940 F.2d at 640, 19 USPQ2d at 1553). In this case, the relevant public comprises ordinary consumers who purchase applicant's goods, because there are no restrictions or limitations to the channels of trade or classes of consumers. The attached evidence from applicant's website and www.wikipedia.org shows that the wording “GLASS” in the applied-for mark means the type of goods offered by the applicant and thus the relevant public would understand this designation to refer primarily to the genus of goods because applicant's goods are glass, glass machines, or comprised of glass. Also see the attached third-party website screen capture that refers to electric privacy glass. Thus, the term ELECTRIC identifies the type of goods offered by the applicant. All of the evidence taken together shows that the wording “ELECTRIC” in the specified classes and “GLASS” in all classes must be disclaimed.

All generic names of a product or service are not registrable and belong in the public domain for competitors to use. *See In re Women's Publ'g Co.*, 23 USPQ2d 1876, 1877 (TTAB 1992) (citing *In re Sun Oil Co.*, 426 F.2d 401, 404, 165 USPQ 718, 719 (C.C.P.A. 1970) (Rich, J., concurring)). The disclaimer of unregistrable matter does not affect the appearance of the mark; that is, a disclaimer does not physically remove the disclaimed matter from the mark. *See Schwarzkopf v. John H. Breck, Inc.*, 340 F.2d 978, 978, 144 USPQ 433, 433 (C.C.P.A. 1965); TMEP §1213.

If applicant does not provide the required disclaimer, the USPTO may refuse to register the entire mark. *See In re Stereotaxis Inc.*, 429 F.3d 1039, 1040-41, 77 USPQ2d 1087, 1088-89 (Fed. Cir. 2005); TMEP §1213.01(b).

Applicant should submit a disclaimer in the following standardized format:

> **No claim is made to the exclusive right to use “ELECTRIC” in classes 001, 011, 019, and 021, and the wording “GLASS” apart from the mark as shown.**

For an overview of disclaimers and instructions on how to satisfy this disclaimer requirement online using the Trademark Electronic Application System (TEAS) form, please go to http://www.uspto.gov/trademarks/law/disclaimer.jsp.

Applicant's Arguments

Applicant appears to argue that the wording should not be disclaimed because the phrase “electric glass” does not appear in the dictionaries that applicant attached to the response. The applicant is not being required to disclaim the phrase “electric glass.” Rather, the requirement is for a disclaimer of ELECTRIC in specified classes and GLASS in all classes. Thus, the fact that “electric glass” does not appear in a dictionary is not persuasive in this case.

Applicant's argument regarding the word ELECTRIC drastically simplifies the applied-for goods to the

extent that applicant's summary is misleading. For example, applicant states in its response that its class 011 goods are "specialty glass products; glassmaking machinery." This summary completely excludes goods in class 011 that are electric, such as electric lamps and parts for electric ovens. When considering the actual identification of goods, and not applicant's "summary" of the identification, the wording ELECTRIC and GLASS clearly do not function as indicators of source but only to identify the type of goods.

Applicant's evidence does not show that ELECTRIC or GLASS would be viewed as a source-identifier. Regardless of whether NIPPON ELECTRIC GLASS may be an indicator of source, the wording GLASS and ELECTRIC must be disclaimed apart from the mark as shown because the wording GLASS and ELECTRIC immediately identifies a feature or characteristic of the goods.

Final Action Response Guidelines

Applicant must respond within six months of the date of issuance of this final Office action or the application will be abandoned. 15 U.S.C. §1062(b); 37 C.F.R. §2.65(a). Applicant may respond by providing one or both of the following:

(1) A response that fully satisfies all outstanding requirements and/or resolves all outstanding refusals.

(2) An appeal to the Trademark Trial and Appeal Board, with the appeal fee of $100 per class.

37 C.F.R. §2.63(b)(1)-(2); TMEP §714.04; *see* 37 C.F.R. §2.6(a)(18); TBMP ch. 1200.

In certain rare circumstances, an applicant may respond by filing a petition to the Director pursuant to 37 C.F.R. §2.63(b)(2) to review procedural issues. TMEP §714.04; *see* 37 C.F.R. §2.146(b); TBMP §1201.05; TMEP §1704 (explaining petitionable matters). The petition fee is $100. 37 C.F.R. §2.6(a)(15).

/Shannon Twohig/
Attorney, USPTO
Law Office 105
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(571) 272-8855

TO RESPOND TO THIS LETTER: Go to http://www.uspto.gov/trademarks/teas/response_forms.jsp. Please wait 48-72 hours from the issue/mailing date before using the Trademark Electronic Application System (TEAS), to allow for necessary system updates of the application. For *technical* assistance with online forms, e-mail TEAS@uspto.gov. For questions about the Office action itself, please contact the assigned trademark examining attorney. **E-mail communications will not be accepted as responses to Office actions; therefore, do not respond to this Office action by e-mail.**

All informal e-mail communications relevant to this application will be placed in the official application record.

WHO MUST SIGN THE RESPONSE: It must be personally signed by an individual applicant or someone with legal authority to bind an applicant (i.e., a corporate officer, a general partner, all joint applicants). If an applicant is represented by an attorney, the attorney must sign the response.

PERIODICALLY CHECK THE STATUS OF THE APPLICATION: To ensure that applicant does not miss crucial deadlines or official notices, check the status of the application every three to four months using the Trademark Status and Document Retrieval (TSDR) system at http://tsdr.uspto.gov/. Please keep a copy of the TSDR status screen. If the status shows no change for more than six months, contact the Trademark Assistance Center by e-mail at TrademarkAssistanceCenter@uspto.gov or call 1-800-786-9199. For more information on checking status, see http://www.uspto.gov/trademarks/process/status/.

TO UPDATE CORRESPONDENCE/E-MAIL ADDRESS: Use the TEAS form at http://www.uspto.gov/trademarks/teas/correspondence.jsp.

About Us
- Message from the Management
- Corporate Information
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Message from the Management

Overcoming difficulties with a sense of urgency, we will create a platform for further growth.

The Start of a New Chapter

Masayuki Arioka, Chairman of the Board, and Motoharu Matsumoto, President

The environment surrounding the liquid crystal display (LCD) glass business, which is NEG's core area of activity, has changed. Area growth can no longer be expected, and product prices continue to decline. In order for us to maintain stable growth, it is important to strengthen our core display glass business, and at the same time, expand our non-display glass businesses, to forge a well-balanced structure. To this end, during the past years we have been transferring domestic production capacity of our display glass overseas to improve profitability, and we also made efforts to develop non-display glass areas, such as glass fibers, glass for optical and electronic devices, glass for pharmaceutical and medical use, heat-resistant glass and glass for building materials. We believe that we have made progress in restructuring our operations.

NEG has established a new top administrative team with Masayuki Arioka (former President) taking over as Chairman of the Board and Motoharu Matsumoto (former Executive Vice President) assuming the role of President. Under this new leadership, we will continue to place great emphasis on

implementing our initiatives to strengthen the display glass business and expand the non-display glass business and to seek diversity in all business fields. The circumstances surrounding us are not favorable. We need to overcome many of the challenges that lie before us through accelerated decision making and rapid implementation. This, we believe, will result in the recovery of our performance and assure future growth.

Initiatives for Fiscal Year 2015

Sales appeared to have bottomed out in fiscal 2014 (beginning April 1 and ending December 31, 2014). Increased efforts to improve production efficiency and reduce costs were made; however, falling prices for LCD glass and increasing raw fuel costs negatively impacted our profits.
Fiscal 2015 (beginning January 1 and ending December 31, 2015) will be the first year after the implementation of change in our accounting term. The NEG Group will vigorously push forward to recover strength in its business performance and increase both sales and profit figures.
In the display glass business, we will fully capitalize on the cost advantage arising from the transfer of our integrated production system (which covers every stage from melting and forming to processing) overseas. We will also boost profitability with highly efficient production. We will maximize production volume for LCD glass at our sites in Korea, which is the largest LCD glass market. To date, 25% of the domestic melting and forming production capacity has been transferred to Korea. With demand growing in China, we will also promote the transfer of production equipment from Japan to China. We are committed to realizing early commencement of production at our two Chinese plants—Electric Glass (Xiamen), our first melting and forming production site in China (with production planned to begin at the end of this year) and Electric Glass (Nanjing), our third processing site in China (with production planned to begin between April and June 2016).
Glass fibers constitute the main driving force of our non-display glass business. Expanded production of glass fibers for high-functional plastics began at our Malaysian subsidiary this spring. We will fully utilize the increased production capacity and expand sales and market share. In regards to other products in the non-display glass business, we will strive to

bolster sales to secure higher profits.

For Mid- to Long-term Growth

In order to secure medium- to long-term growth, it is of utmost importance to achieve diversification in each business area and to attain stable profits.
In the non-display glass business, progress was seen in the expansion of the glass fiber business, restructuring of glass for pharmaceutical and medical use operations, and development of glass products used in electronic parts. Improvements in profitability were seen in areas of glass for building materials and heat-resistant glass. Accordingly, preparations for future growth in these product areas have been completed.
To increase the profitability in the display glass business, downsizing at Japan-based facilities and transfer of related production capacity overseas is underway. We will strive to enhance cost competitiveness in all areas and build a well-balanced business structure that ensures stable profits.
In parallel, NEG has been strengthening its R&D organization, such as by establishing R&D centers (namely, the P&P Technology Center Otsu/Takatsuki). We will undertake the development of products in potential growth areas. NEG views displays, automobiles, medical care, information-communication technology, lighting, energy, and infrastructure as potential growth areas, and it will further work toward development in these fields.
In the area of displays, we will aggressively expand business, especially in emerging markets, and develop products for high-functional displays. In the area of automobiles, we will provide glass products that will enable improvements in vehicular comfort and environmental performance and will enhance technology advancement in electronic and computerized control systems. We will contribute to medical improvements by supplying chemical-resistant glass tubing, high-functional radiation shielding glass, and medical tools using glass with superior characteristics.
Furthermore, we view the following areas as engines of growth: in the information-communication technology area the source of growth is the increase in communication traffic and advancement of information technology; for lighting it is the popularization of LED and OLED lighting; for the energy field it is the increase in environmental consciousness; and for infrastructure it is the need to achieve durability and the safety of buildings.

infrastructure it is the need to achieve durability and the safety of buildings. NEG will continue to develop highly-functional products that fulfill these increased needs.

▣ Our CSR Policy

NEG places a great deal of importance on contribution to local communities, employment of people with disabilities and environmental preservation as the three central themes in its CSR activities. We know that it is imperative to minimize the use of energy and keep emissions of environmentally harmful substances as low as possible throughout our glass production process. We prioritize the creation of workplaces at which people with disabilities will be safe and comfortable. NEG supports events and activities that help educate the younger generation of the community as a part of is local contribution efforts.
In fiscal 2015, NEG plans to hold educational programs that will inspire local elementary and junior high school students with the joy that can be found in creating things.

▣ Conclusion

Against the backdrop of advancing changes in business structure, our top priority in fiscal 2015 is to increase our income and overall profit by improving the profitability of each of our businesses. We would also like to meet the expectations of our various stakeholders, including customers and shareholders, by continuing to offer products useful for society and by contributing to society's development. We appreciate your continued support.

Masayuki Arioka, Chairman of the Board
Motoharu Matsumoto, President

Products
- Glass for Display Devices
  - Glass for Liquid Crystal Displays
  - Glass for Organic LED Display
  - Glass for Cathode Ray Tubes
- Glass for Electronic Devices
  - Glass for Electronic Devices
  - Glass for Optical Devices
- Glass Fiber
- Building Materials, Heat-Resistant Glass, and More

Products

NEG's High-Tech glass is developed with the characteristics, shapes, and high levels of quality and precision that optimally meet the needs of customers. High-Tech glass is used in information devices such as flat panel displays, cellular phones, and digital cameras. It is also increasingly found in everything from kitchen appliances to automobiles and building materials.

Glass for Display Devices

- Glass for Liquid Crystal Displays

Glass for Electronic Devices

- Glass for Electronic Devices
- Glass for Optical Devices

* Glass for Building Materials
* Heat-Resistant Class
* Glass for Lighting, Medical, and More

Product List

Links

Glass for Electronic Devices

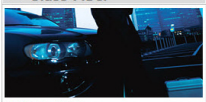
Glass for Optica Devices

ARG Glass Fiber

Glass for Building Material

Glass for Organic LED Display
Glass for Cathode Ray Tubes

Glass Fiber



Glass Fiber

Building Materials, Heat-Resistant Glass, and More

Glass for Building Materials
Heat-Resistant Glass
Glass for Lighting, Medical, and More

Nippon Electric Glass America, Inc. site

Nippon Electric Glass America, Inc.

Our sales company for North America area except building materials

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Nippon Electric Glass

From Wikipedia, the free encyclopedia

Nippon Electric Glass Co., Ltd. (日本電気硝子株式会社 *Nippon Denki Garasu Kabushiki-gaisha*[?]), also known as **NEG**, is a Japanese glass manufacturer. The company is a manufacturer of glass for flat panel displays (FPD). It has about 20% share in the world's production of glass for liquid crystal displays (LCD).[4]

The company is listed on the Tokyo Stock Exchange and is a constituent of the Nikkei 225 stock index.[5]

Contents

History [edit]

- 1944: Established with investment from NEC Corporation and other companies.
- 1949: Separated from NEC, and **Nippon Electric Glass** was founded as an independent company.
- 1951: Successfully began use of the Danner process to form glass tubing automatically; initiated mass production.
- 1956: Started continuous production of glass tubing using a tank furnace.
- 1965: Started production of black-and-white CRT glass.
- 1968: Started production of color CRT glass.
- 1973: Company stock listed on the Tokyo Stock Exchange (TSE) and Osaka Securities Exchange (OSE) (Second Section)

Nippon Electric Glass Co., Ltd.

Type	Public KK
Traded as	TYO: 5214 Nikkei 225 Component
Industry	Glass
Founded	(December 1, 1949; 65 years ago)
Headquarters	7-1, Seiran 2-chome, Ōtsu, Shiga 520-8639, Japan
Key people	Yuzo Izutsu (Chairman of the Board) Masayuki Arioka (President)
Products	Glass products Glassmaking machinery

- 1973: Company stock listed on the Tokyo Stock Exchange (TSE) and Osaka Securities Exchange (OSE) (Second Section).
- 1974: Started production of thin sheet glass for LCDs.
- 1983: Company stock transferred to the First Section of the TSE and OSE.
- 1988: Started CRT glass operations in the US via joint venture.
- 1998: Started production of PDP substrate glass using the float process.
- 1999: Acquired ISO 14001 certification for all plants in Japan.
- 1999: Started production of LCD substrate glass by the overflow process.
- 2004: Ended CRT glass production in the US and Mexico.
- 2010: Started production of substrate glass for solar cells.[6]

Revenue	▼ US$ 2.4 billion (FY 2013) (¥ 252.54 billion) (FY 2013)
Profit	▲ US$ 110.2 million (FY 2013) (¥ 12.43 billion) (FY 2013)
Number of employees	5,275 (consolidated as of June 2014)
Website	Official website

Footnotes / references
[1][2][3]

Products [edit]

Glass for display devices [edit]

- Glass for Liquid Crystal Displays (LCDs)
  - Substrate glass for LCDs
  - Glass tubing for cold cathode fluorescent lamps (CCFL)
  - Cell spacing for LCDs (micro rods)
- Glass for Plasma Display Panels (PDPs)
  - Substrate glass for PDPs
  - Glass pastes for PDPs
  - Glass for exhaust tubes, tablets, and firing setters
- Glass for CRTs
  - Panel glass for CRTs
  - CRT neck tubes, stem tubes, and exhaust tubes

Glass for electronic devices [edit]

- Powder glass
- Cover glass for image sensors
- Glass for diodes
- Glass for laser diodes

Glass fiber [edit]

- Chopped strands for function plastics
- Yarns for printed circuit boards
- Roving for reinforced plastic
- Alkali resistant glass fiber

Building materials, heat-resistant glass [edit]

- Glass for building materials
  - Glass blocks
  - Glass-ceramic building materials
  - Fire-rated glass
  - Radiation shielding glass
- Heat-resistant glass
  - Super heat-resistant glass-ceramic
  - Super heat-resistant glass-ceramic for cooking appliance top plates
  - Heat-resistant glass
- Glass for lighting and medical use
  - Glass for lighting

- Glass for optical devices
  - Glass ferrules and micro capillaries for optical connectors
  - Glass material for aspherical lenses
  - Collimator components
  - Micro prisms
  - Coupler housing
- Glass for medical and laboratory applications
- Glass for thermos flasks

Glassmaking and processing machinery [edit]

References [edit]

1. ^ "Corporate Information". Nippon Electric Glass. Retrieved September 5, 2014.
2. ^ "Company Summary". Google Finance. Retrieved September 5, 2014.
3. ^ "Corporate Financials". Bloomberg Businessweek. Retrieved September 5, 2014.
4. ^ "Display Glass: Bigger, Thinner, and Stronger". Society for Information Display. January 2012. Retrieved September 7, 2014.
5. ^ "Components:Nikkei Stock Average". Nikkei Inc. Retrieved September 5, 2014.
6. ^ "Company History". Nippon Electric Glass. Retrieved September 5, 2014.

External links [edit]

- Official website **(English)**

Japan portal
Chemistry portal
Electronics portal
Companies portal

V · T · E **Nikkei 225 companies of Japan**

7&i · Advantest · ÆON · AGC · Ajinomoto · Alps · ANA · Amada · Aozora Bank · Asahi Breweries · Asahi Kasei · Astellas · Bank of Yokohama · Bridgestone · Canon · Casio · Chiba Bank · Chiyoda · Chuden · Chugai · Citizen · Comsys · Credit Saison · Dai-ichi Life · Daiichi Sankyo · Daikin · Dainippon Screen · Dainippon Sumitomo Pharma · Daiwa House · Daiwa Securities · Denka · Denso · Dentsu · DNP · Dowa · Ebara · Eisai · Fanuc · Fast Retailing · Fuji Electric · Fuji Heavy Industries · Fujifilm · Fujikura · Fujitsu · Fukuoka Financial · Furukawa Co., Ltd. · Furukawa Electric · GS Yuasa · Heiwa Real Estate · Hino · Hitachi · Hitachi Construction Machinery · Hitz · Hokuetsu Paper · Honda · IHI · INPEX · Isetan-Mitsukoshi · Isuzu · Itochu · JFE · J. Front Retailing · JGC · JR Central · JR East · JR West · JSW · JT · JTEKT · JX · Kajima · KEPCO · Kao · Kawasaki · KDDI · Keio · Keisei · Kikkoman · Kirin · K Line · Kobelco · Komatsu · Konami · Konica Minolta · Kubota · Kuraray · Kyocera · Kyowa Hakko Kirin · Marubeni · Maruha Nichiro · Marui · Matsui Securities · Mazda · Meidensha · Meiji Holdings · MES · Minebea · Mitsubishi Chemical · Mitsubishi Corporation · Mitsubishi Electric · Mitsubishi Estate · Mitsubishi Heavy Industries · Mitsubishi Logistics · Mitsubishi Materials · Mitsubishi Motors · Mitsui & Co. · Mitsui Chemicals · Mitsui Fudosan · Mitsui Kinzoku · Mitsumi Electric · Mizuho · MOL · MS&AD · MUFG · NEC · **NEG** · NGK · Nichirei · Nikon · Nippon Express · Nippon Kayaku · Nippon Light Metal · Nippon Ham · Nippon Paper Industries · Nippon Soda · Nippon Suisan · Nissan · Nissan Chemical · Nisshin Seifun · Nisshin Steel · Nisshinbo · Nittobo · Nitto Denko · NKSJ · Nomura · NSG · NSK · NSSMC · NTN · NTT · NTT Data · NTT DoCoMo · NYK · Obayashi · Odakyu · Oji Holdings Corporation · OKI · Okuma · Olympus · Osaka Gas · Pacific Metals · Panasonic · Pioneer · Resona · Ricoh · Sapporo Holdings · Secom · Sekisui House · Sharp · Shimz · Shin-Etsu · Shinsei Bank · Shionogi · Shiseido · Shizuoka Bank · Showa Denko ·

Showa Shell · SKY Perfect JSAT · SoftBank · Sojitz · Sony · Sony Financial · SUMCO · Sumitomo Chemical · Sumitomo Corporation · Sumitomo Electric · Sumitomo Heavy Industries · Sumitomo Metal Mining · Sumitomo Mitsui Financial · Sumitomo Mitsui Trust · Sumitomo Osaka Cement · Sumitomo Realty · Suzuki · T&D · Taiheiyo Cement · Taisei · Taiyo Yuden · Takara · Takashimaya · Takeda · TDK · Teijin · TEPCO · Terumo · Tobu · Toho · Toho Zinc · Tokai Carbon · Tokuyama Corporation · Toyo Seikan · Tokio Marine · Tokyo Dome · Tokyo Electron · Tokyo Gas · Tokyo Tatemono · Tokyu · Tokyu Land · Toppan · Toray · Toshiba · Tosoh · Toto · Toyobo · Toyota · Toyota Tsusho · Trend Micro · Ube · Unitika · Uny · Yahoo! Japan · Yamaha · Yamato Transport · Yasakawa · Yokogawa Electric · Yokohama Rubber

V · T · E	**Glass makers and brands**
Contemporary companies	Anchor Hocking · Arc International · Ardagh Group · Armashield · Asahi · Aurora Glass Foundry · Aventas group · Baccarat · Berengo Studio · Blenko Glass Company · Bodum · Bormioli Rocco · Borosil · Cox & Barnard · Corning · Dartington Crystal · Daum · Edinburgh Crystal · Effetre International · Fanavid · Fenton Art Glass Company · Firozabad glass industry · Flabeg · Franz Mayer · Glava · Glaverbel · Guardian Industries · Hadeland · Hardman & Co. · Heaton, Butler and Bayne · Holmegaard Glassworks · Holophane · Hoya · Kingdom of Crystal · Kokomo Opalescent Glass Works · Kosta Glasbruk · Libbey Owens Ford · Liuli Gongfang · Ittala · Luoyang · Johns Manville · Mats Jonasson Målerås · Moser Glass · Mosser Glass · Nippon Sheet Glass · Ohara · Orrefors · Osram · Owens Corning · Owens-Illinois · Paşabahçe · Pauly & C. - Compagnia Venezia Murano · Phu Phong · Pilkington · PPG · Preciosa · Riedel · Royal Leerdam Crystal · Saint-Gobain · Saint-Louis · Samsung Corning Precision Glass · Şişecam · Schonbek · Schott · Sterlite Optical Technologies · Steuben · Swarovski · Tyrone Crystal · Val Saint Lambert · Verrerie of Brehat · Waterford · Watts & Co · World Kitchen · Xinyi Glass · Zwiesel
Historic companies	Bakewell Glass · Belmont Glass Company · Boston and Sandwich Glass Company · Brockway Glass · Carr Lowrey Glass Company · Cambridge Glass · Chance Brothers · Clayton and Bell · Dugan Glass Company · Duncan & Miller · Dunbar Glass · Fostoria Glass Company · General Glass Industries · Gus Crystal · Alexander Gibbs · Grönvik glasbruk · Hartford City Glass Company · Hazel-Atlas · Heisey · Hemingray Glass Company · J. H. Hobbs, Brockunier and Company · Knox Glass Bottle Company · Lavers, Barraud and Westlake · Manufacture royale de glaces de miroirs · Morris & Co. · Nachtmann · Northwood Glass Company · Novelty Glass Company · Old Dominion Glass Company · James Powell and Sons · Ravenhead glass · The Root Glass Company · Seneca Glass Company · Shrigley and Hunt · Sneath Glass Company · Venini & C. · Ward and Hughes · Westmoreland Glass Company · Wheaton Industries · Whitall Tatum Company · White Glass Company · Worshipful Company
Glassmakers	A. H. Heisey · Alastair Pilkington · Antonio Neri · Dante Marioni · Edward D. Libbey · Frederick Carder · Friedrich · Henry Clay Fry · Henry Crimmel · Henry William Stiegel · Irving Wightman Colburn · John Adams · John M. Whitall · Lino Tagliapietra · Michael Joseph Owens · Otto Schott · Paolo Venini · Richard M. Atwater · S. Donald Stookey · Salviati · Tomasz Urbanowicz · W. E. S. Turner
Trademarks and brands	Activ · Bohemian glass · Bomex · Duran · Endural · Burmese glass · Chevron bead · Corelle · CorningWare · Cranberry glass · Cristallo · Dragontrail · Favrile · Fire-King · Gorilla Glass · Macor · Millefiori · Murano glass · Opaline glass · Pyrex · Ravenhead glass · Tiffany glass · Vitrite · Vitrolite · Vycor · Waterford Crystal · Wood's glass · Zerodur
Related articles	List of defunct glassmaking companies

This article about a Japanese corporation– or company–related topic is a stub. You can help Wikipedia by expanding it.

Categories: Nikkei 225 | Companies of Japan | Manufacturing companies of Japan | Glassmaking companies | Companies listed on the Tokyo Stock Exchange | Companies based in Shiga Prefecture | Manufacturing companies established in 1949 | Glass trademarks and brands | Japanese brands | Japanese company stubs

http://www.polytronixglass.com/products/switchable-electric-privacy-glass/?gclid=CP-w4M7-t8cCFcESHwodriwCsA
08/20/2015 11:37:03 AM

Polytronix™

(972) 885-8597

PRODUCTS APPLICATIONS RESOURCES ABOUT US CONTACT

Switchable Privacy Glass

Privacy and lighting at the flip of a switch

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Company

Phone #

Get Quote

- Privacy and security with architectural integrity
- Visual attention to interior and exterior design
- No distracting shutters and drapes
- Beauty and functionality combined!

HOW IS OUR SWITCHABLE PRIVACY GLASS GREEN?

Polytronix is aware of the importance of limiting its carbon footprint, and is proactive in implementing directives to ensure our glass/film products are ecofriendly. Switchable Privacy Glass saves energy by using natural lighting while maintaining privacy.

Switchable Privacy Glass incorporates environmentally friendly procedures by:

- Reducing fabric wastes used to make curtains/drapes
- Eliminating the need for projection screens and dry erase boards
- Liquid crystal components are organic and biodegradable
- Very low power consumption (equivalent to a clock radio)
- Blocks over 80% infrared and over 99% ultraviolet light

BENEFITS TO OUR CUSTOMERS

Highest Quality Product

- Leading manufacturer of PDLC glass panels
- Cooperation with experts in glass and architectural industries

Qualified Laminators in both east and west coasts

- Lower shipping costs to customers

Customer Services and Technical Support

- Quick response to customers' needs
- Field supervision when necessary

Technology & Manufacturing

Structure of Switchable Privacy Glass Liquid Crystal Film

PDLC (Polymer Dispersed Liquid Crystal) is a medium whose light scattering power is adjustable through applying an electric field. In their natural (uncharged) state, the PDLC droplets randomly align.

PDLC Light Scattering Mechanism (How it Works)

The ordinary refractive index of these liquid crystals does not match that of the polymer, and the incident light is thus scattered, resulting in a translucent state. When an electric field is applied across the material, the PDLC droplets re-orient, and subsequently the extraordinary refractive index of the liquid crystal matches that of the polymer. Therefore, the incident light can pass through, resulting in a transparent state.

MANUFACTURING:

Field tests have successfully demonstrated that our Switchable Privacy Glass, when properly installed and maintained will last for more than ten years.

Our Switchable Privacy Film is made of two layers of transparent conductive films sandwiched with PDLC material. The film is then laminated between two pieces of glass. When electricity is applied to the film the liquid crystals line up and the window is clear. When the power is turned off, the liquid crystals return to their normal scattering positions and turn the glass from clear to translucent.

The liquid crystal privacy glass is constructed in a way similar to the construction of laminated glass. The outside skins are made up of glass (normally 5 or 6 mm of annealed glass) on each side, and then a PVB interlayer is inserted on each side to trap and hold the liquid crystal privacy film. This film has electrical wiring that needs to be connected to a transformer to supply power for the "on" (clear state) mode.

To learn more about the features and specifications of our Switchable Privacy Glass, read our Technical Manual.

Our products are used in **thousands of projects** all around the globe.

Meet some of our valued clients.

CORNING ExxonMobil Gensler HKS IBM LOCKHEED MA

About Polytronix Inc.

Polytronix, Inc. is dedicated to providing the highest quality switchable privacy glass and LED glass products that meet or exceed our customers' expectations and requirements. Learn More

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To:	Nippon Electric Glass Co., Ltd. (svoeller@hsml.com)
Subject:	U.S. TRADEMARK APPLICATION NO. 79137917 - NIPPON ELECTRIC GLASS - 08279.1699US
Sent:	8/20/2015 11:40:47 AM
Sent As:	ECOM105@USPTO.GOV
Attachments:	

UNITED STATES PATENT AND TRADEMARK OFFICE (USPTO)

IMPORTANT NOTICE REGARDING YOUR U.S. TRADEMARK APPLICATION

USPTO OFFICE ACTION (OFFICIAL LETTER) HAS ISSUED
ON **8/20/2015** FOR U.S. APPLICATION SERIAL NO. 79137917

Please follow the instructions below:

(1) TO READ THE LETTER: Click on this link or go to http://tsdr.uspto.gov, enter the U.S. application serial number, and click on "Documents."

The Office action may not be immediately viewable, to allow for necessary system updates of the application, but will be available within 24 hours of this e-mail notification.

(2) TIMELY RESPONSE IS REQUIRED: Please carefully review the Office action to determine (1) how to respond, and (2) the applicable response time period. Your response deadline will be calculated from **8/20/2015** (*or sooner if specified in the Office action*). For information regarding response time periods, see http://www.uspto.gov/trademarks/process/status/responsetime.jsp.

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